# 6. Schematic Diagrams


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**Note**

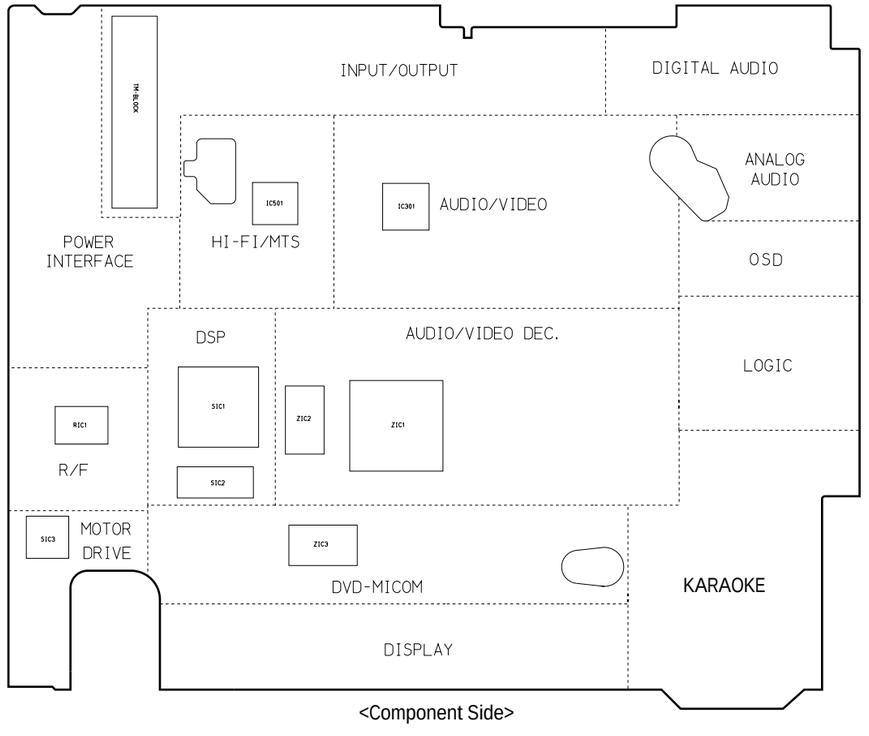
For schematic Diagram
- Resistors are in ohms, 1/8W unless otherwise noted.

**Special note :**
Most semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "electrostatically sensitive (ES) devices" section of this service manual.

**Note :**
Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list (may be slightly different or amended since this drawing was prepared).

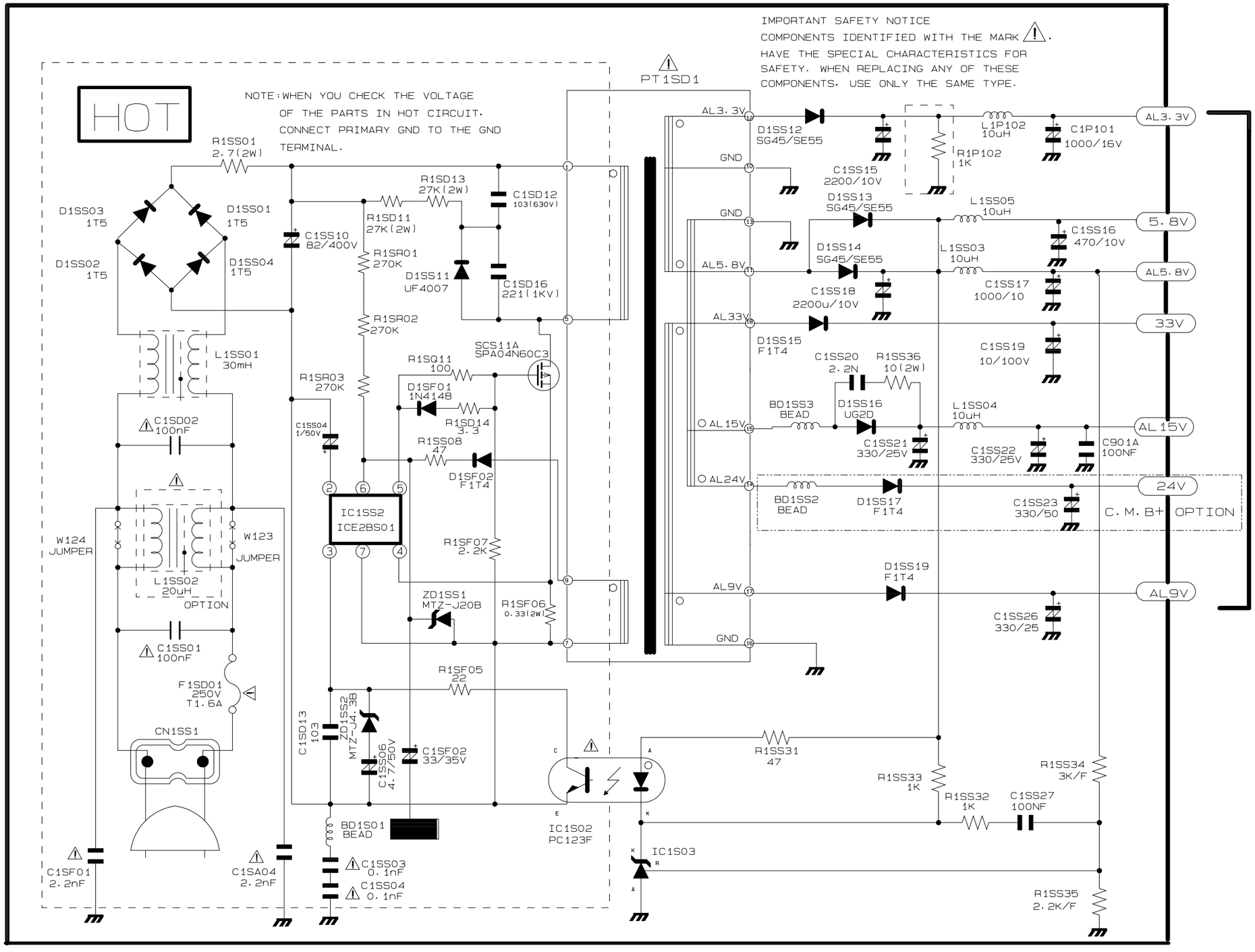
**Important safety notices :**
Components identified with the mark ⚠ have the special characteristics for safety. When replacing any of these components.
Use only the same type.

## ◆ Block Identification of Main PCB

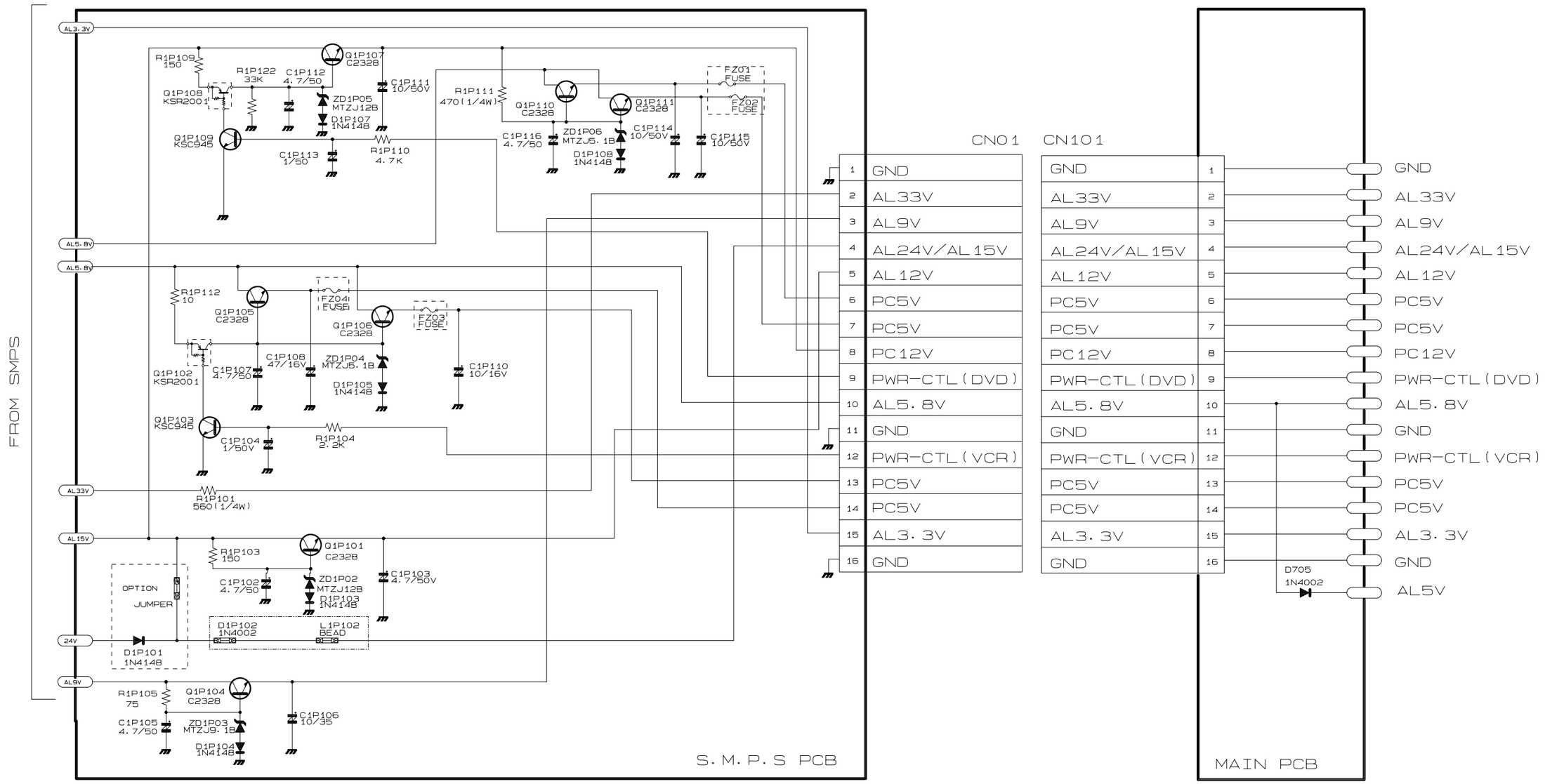


<Component Side>

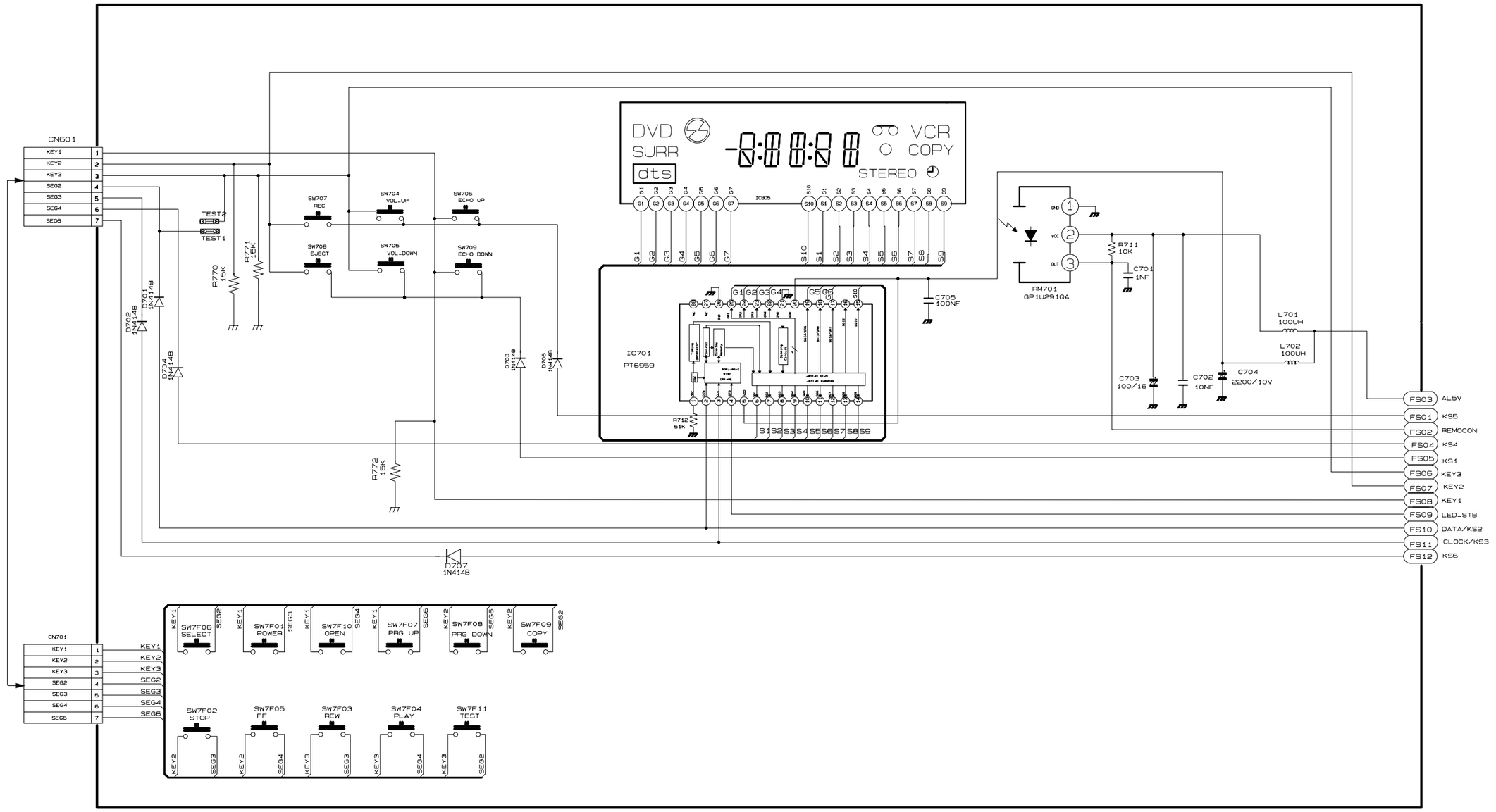
## 6-1 S.M.P.S.


IMPORTANT SAFETY NOTICE
COMPONENTS IDENTIFIED WITH THE MARK ⚠.
HAVE THE SPECIAL CHARACTERISTICS FOR
SAFETY. WHEN REPLACING ANY OF THESE
COMPONENTS. USE ONLY THE SAME TYPE.
HOT
NOTE: WHEN YOU CHECK THE VOLTAGE
OF THE PARTS IN HOT CIRCUIT.
CONNECT PRIMARY GND TO THE GND
TERMINAL.
PT1SD1
R1SS01 2.7(2W)
D1SS03 1T5
D1SS01 1T5
D1SS02 1T5
D1SS04 1T5
C1SS10 82/400V
R1SD13 27K(2W)
R1SD11 27K(2W)
C1SD12 103(630V)
R1SR01 270K
D1SS11 UF4007
C1SD16 221(1KV)
R1SR02 270K
R1SR03 270K
L1SS01 30mH
SCS11A SPA04N60C3
R1SQ11 100
D1SF01 1N4148
R1SD14 3.3
C1SS04 1/50V
R1SS08 47
D1SF02 F1T4
IC1SS2 ICE2BS01
R1SF07 2.2K
C1SD02 100nF
W124 JUMPER
W123 JUMPER
L1SS02 20uH
OPTION
C1SS01 100nF
F1SD01 250V T1.6A
CN1SS1
ZD1SS1 MTZ-J20B
R1SF06 0.33(2W)
R1SF05 22
C1SD13 103
ZD1SS2 MTZ-J4.3B
C1SS06 4.7/50V
C1SF02 33/35V
BD1S01 BEAD
C1SF01 2.2nF
C1SA04 2.2nF
C1SS03 0.1nF
C1SS04 0.1nF
IC1S02 PC123F
IC1S03
R1SS31 47
R1SS33 1K
R1SS32 1K
R1SS34 3K/F
C1SS27 100NF
R1SS35 2.2K/F
AL3.3V
GND
GND
AL5.8V
AL33V
AL15V
AL24V
AL9V
GND
D1SS12 SG45/SE55
C1SS15 2200/10V
L1P102 10uH
C1P101 1000/16V
R1P102 1K
D1SS13 SG45/SE55
L1SS05 10uH
C1SS16 470/10V
D1SS14 SG45/SE55
L1SS03 10uH
C1SS17 1000/10
C1SS18 2200u/10V
D1SS15 F1T4
C1SS19 10/100V
C1SS20 2.2N
R1SS36 10(2W)
BD1SS3 BEAD
D1SS16 UG2D
L1SS04 10uH
C1SS21 330/25V
C1SS22 330/25V
C901A 100NF
BD1SS2 BEAD
D1SS17 F1T4
C1SS23 330/50
C.M.B+ OPTION
D1SS19 F1T4
C1SS26 330/25
AL3.3V
5.8V
AL5.8V
33V
AL15V
24V
AL9V
TO POWER

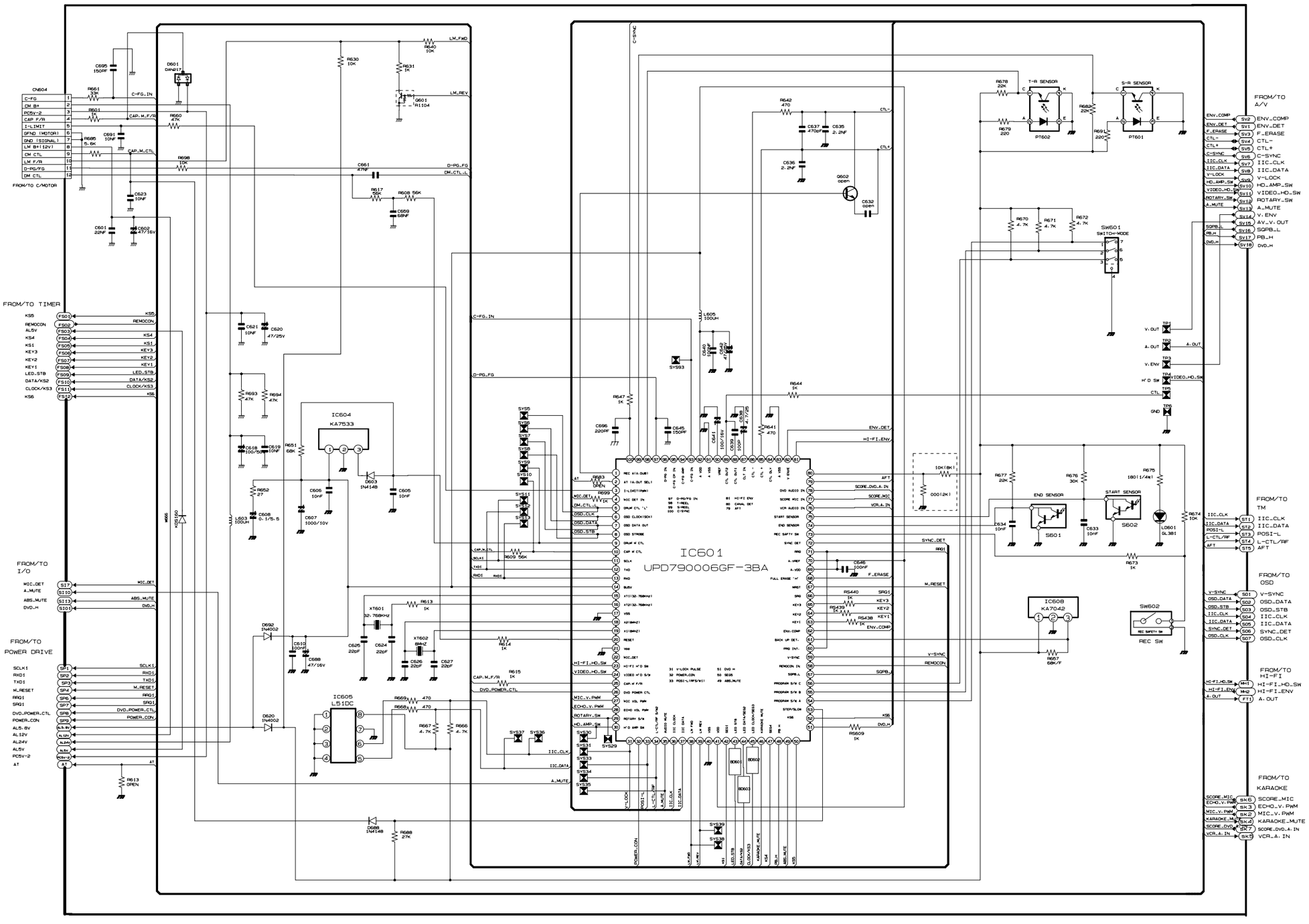
## 6-2 Power Drive



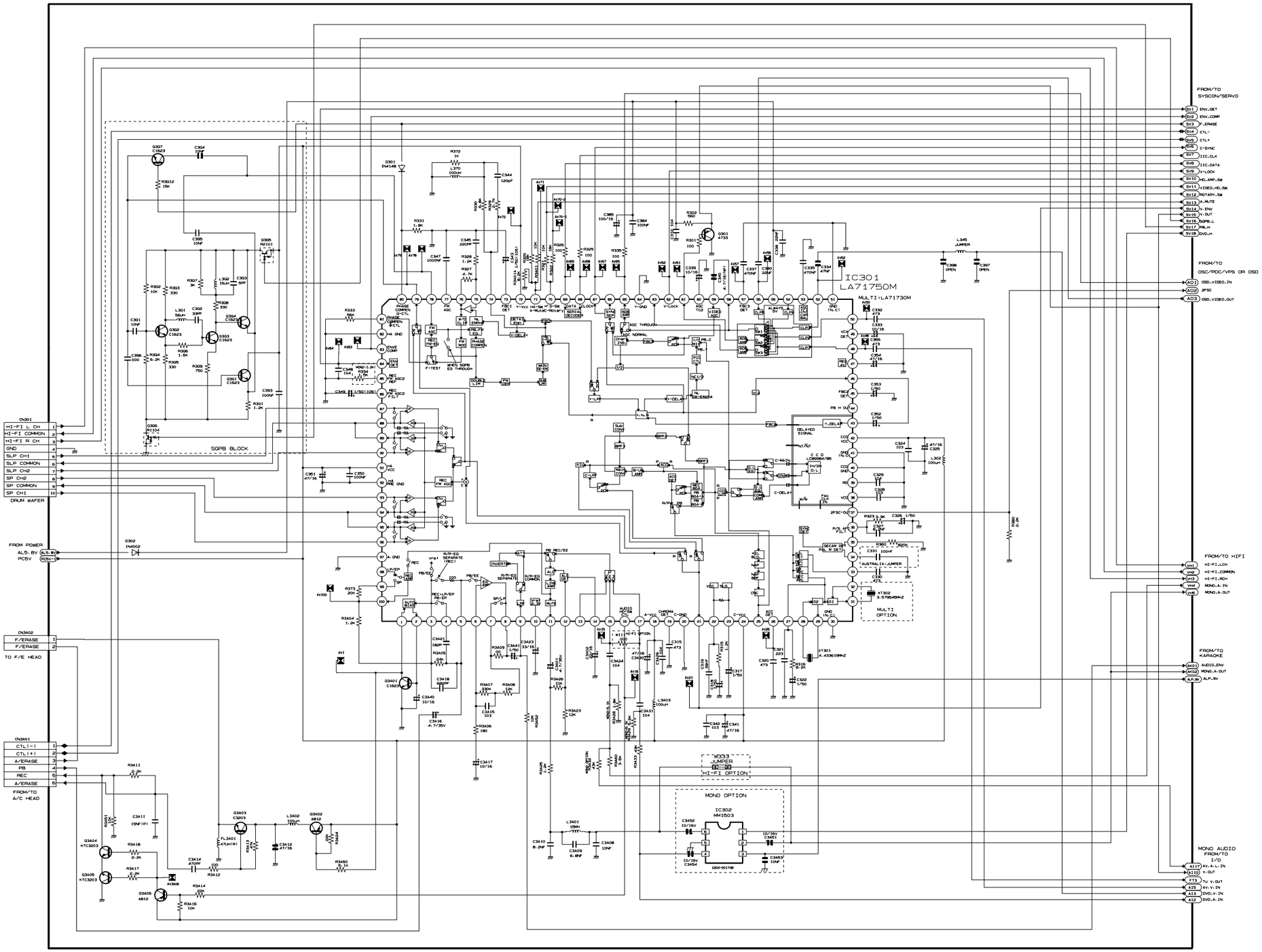
## 6-3 Display/Function



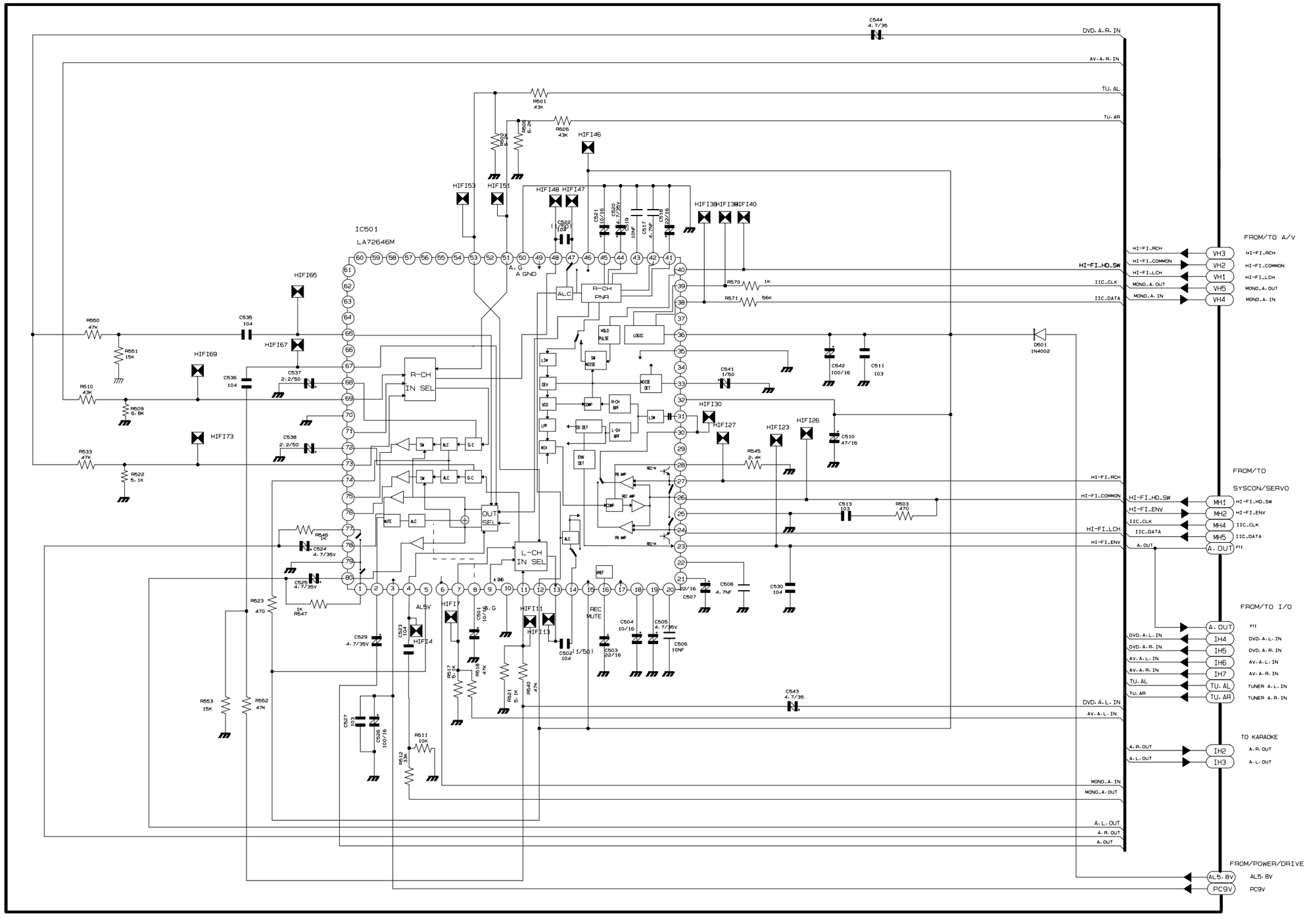
# 6-4 System Control/Servo



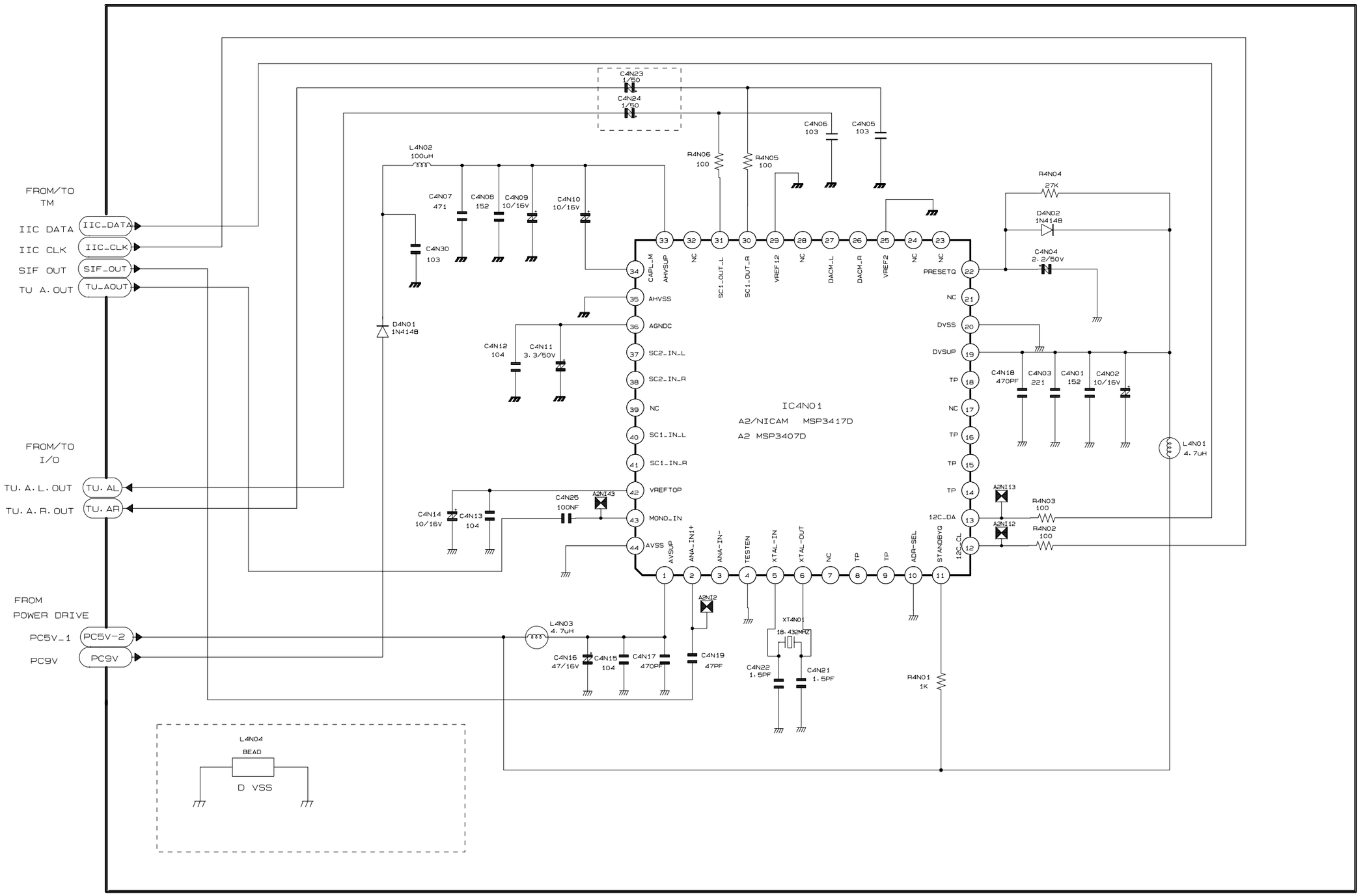
## 6-5 A/V


IC301
LA71750M
MULTI:LA71730M
IC302
MM1503
MONO OPTION
W333
JUMPER
HI-FI OPTION
MULTI
OPTION
SQPB BLOCK
CN301
DRUM WAFER
FROM POWER
CN3402
TO F/E HEAD
CN3401
FROM/TO
A/C HEAD
FROM/TO
SYSCON/SERVO
FROM/TO
OSC/PDC/VPS OR OSD
FROM/TO HIFI
FROM/TO
KARAOKE
MONO AUDIO
FROM/TO
I/O

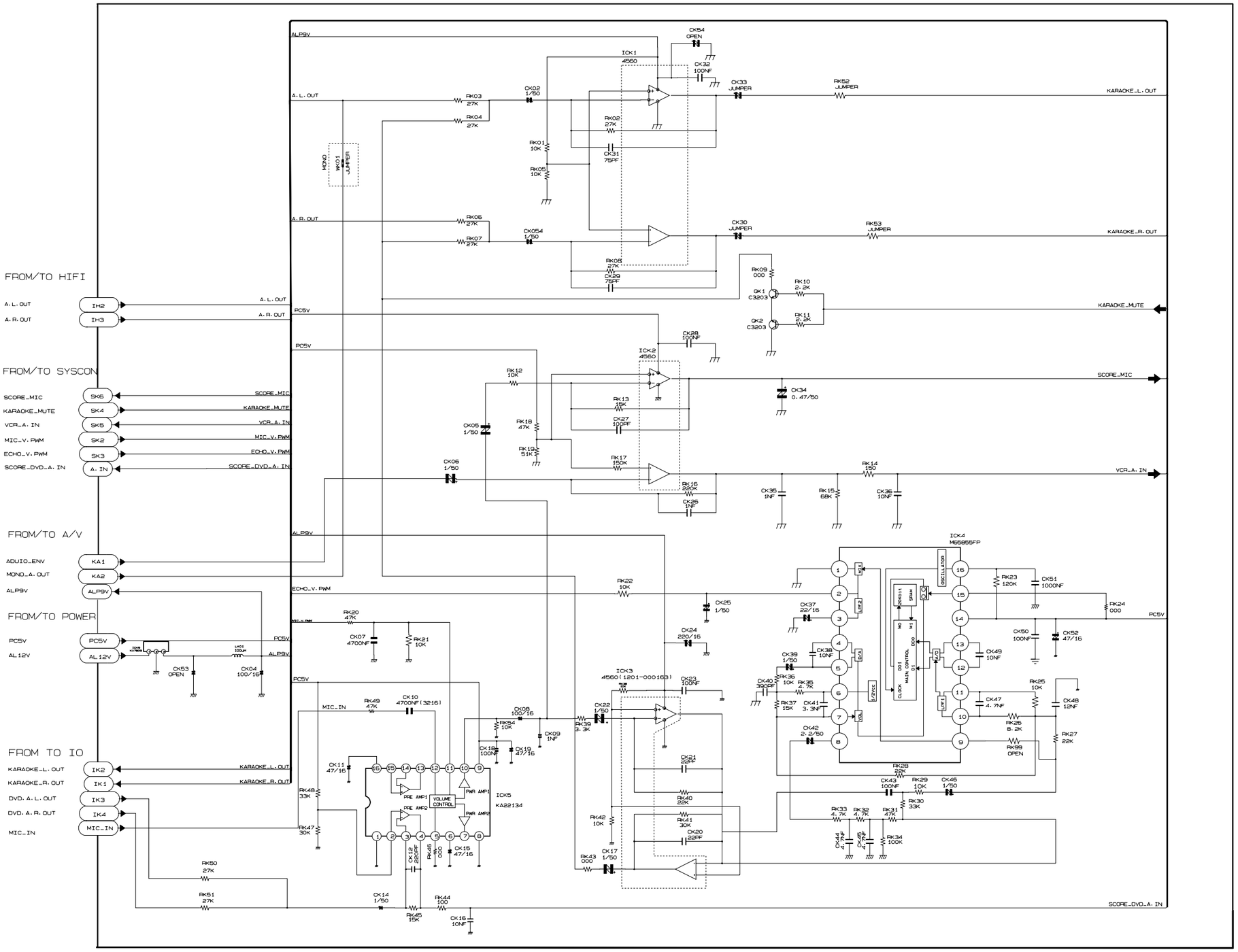
## 6-6 Hi-Fi


IC501
LA72646M
R-CH IN SEL
L-CH IN SEL
OUT SEL
ALC
R-CH PNR
LOGIC
HOLD PULSE
SW NOISE
NOISE DET
DEV
VCO
LPF
MIX
COMP
R-CH BPF
L-CH BPF
LIM
DD DET
ENV DET
REC MUTE
A.G
A GND
DVD_A_R_IN
AV_A_R_IN
TU_AL
TU_AR
HI-FI_HD_SW
HI-FI_COMMON
HI-FI_LCH
HI-FI_RCH
IIC_CLK
IIC_DATA
MONO_A_OUT
MONO_A_IN
FROM/TO A/V
VH3 HI-FI_RCH
VH2 HI-FI_COMMON
VH1 HI-FI_LCH
VH5 MONO_A_OUT
VH4 MONO_A_IN
FROM/TO SYSCON/SERVO
MH1 HI-FI_HD_SW
MH2 HI-FI_ENV
MH4 IIC_CLK
MH5 IIC_DATA
A_OUT FFI
FROM/TO I/O
IH4 DVD_A_L_IN
IH5 DVD_A_R_IN
IH6 AV_A_L_IN
IH7 AV_A_R_IN
TU_AL TUNER A_L_IN
TU_AR TUNER A_R_IN
TO KARAOKE
IH2 A_R_OUT
IH3 A_L_OUT
FROM/POWER/DRIVE
AL5.8V
PC9V
D501 1N4002

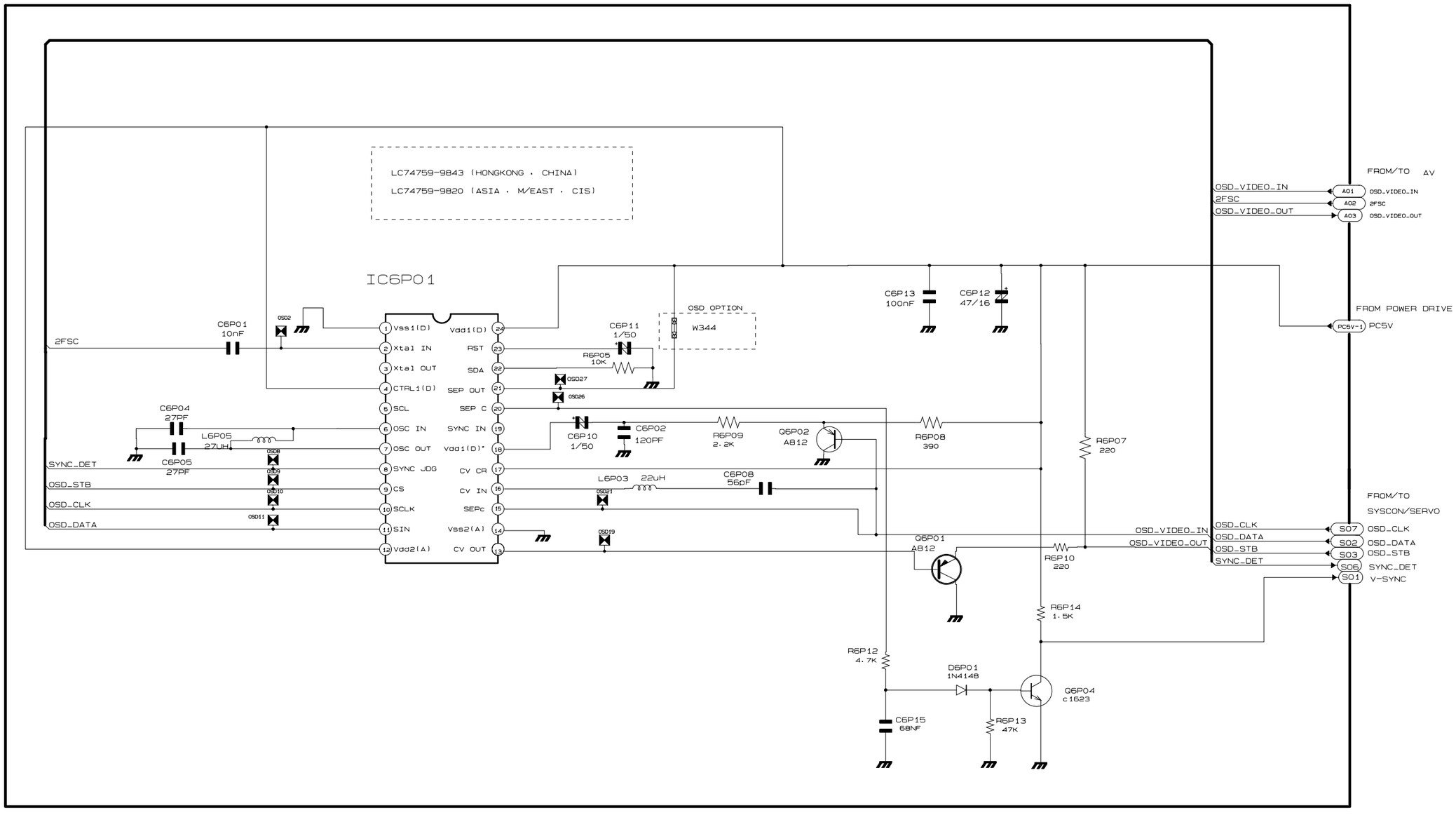
## 6-7 A2/NICAM


FROM/TO TM
IIC DATA
IIC CLK
SIF OUT
TU A.OUT
IIC_DATA
IIC_CLK
SIF_OUT
TU_AOUT
FROM/TO I/O
TU. A. L. OUT
TU. A. R. OUT
TU. AL
TU. AR
FROM POWER DRIVE
PC5V_1
PC9V
PC5V-2
PC9V
C4N23 1/50
C4N24 1/50
L4N02 100uH
C4N07 471
C4N08 152
C4N09 10/16V
C4N10 10/16V
C4N30 103
D4N01 1N4148
C4N12 104
C4N11 3.3/50V
C4N14 10/16V
C4N13 104
C4N25 100NF
A2N143
L4N03 4.7uH
C4N16 47/16V
C4N15 104
C4N17 470PF
C4N19 47PF
A2N12
R4N06 100
R4N05 100
C4N06 103
C4N05 103
R4N04 27K
D4N02 1N4148
C4N04 2.2/50V
C4N18 470PF
C4N03 221
C4N01 152
C4N02 10/16V
L4N01 4.7uH
A2N113
A2N112
R4N03 100
R4N02 100
XT4N01 18.432MHZ
C4N22 1.5PF
C4N21 1.5PF
R4N01 1K
IC4N01
A2/NICAM MSP3417D
A2 MSP3407D
33 CAPL_M
32 AHVSUP
31 NC
30 SC1_OUT_L
29 SC1_OUT_R
28 VREF12
27 NC
26 DACM_L
25 DACM_R
24 VREF2
23 NC
22 NC
PRESETQ
21 NC
20 DVSS
19 DVSUP
18 TP
17 NC
16 TP
15 TP
14 TP
13 I2C_DA
12 I2C_CL
11 STANDBYQ
10 ADR-SEL
9 TP
8 TP
7 NC
6 XTAL_OUT
5 XTAL_IN
4 TESTEN
3 ANA_IN-
2 ANA_IN1+
1 AVSUP
35 AHVSS
36 AGNDC
37 SC2_IN_L
38 SC2_IN_R
39 NC
40 SC1_IN_L
41 SC1_IN_R
42 VREFTOP
43 MONO_IN
44 AVSS
L4N04
BEAD
D VSS

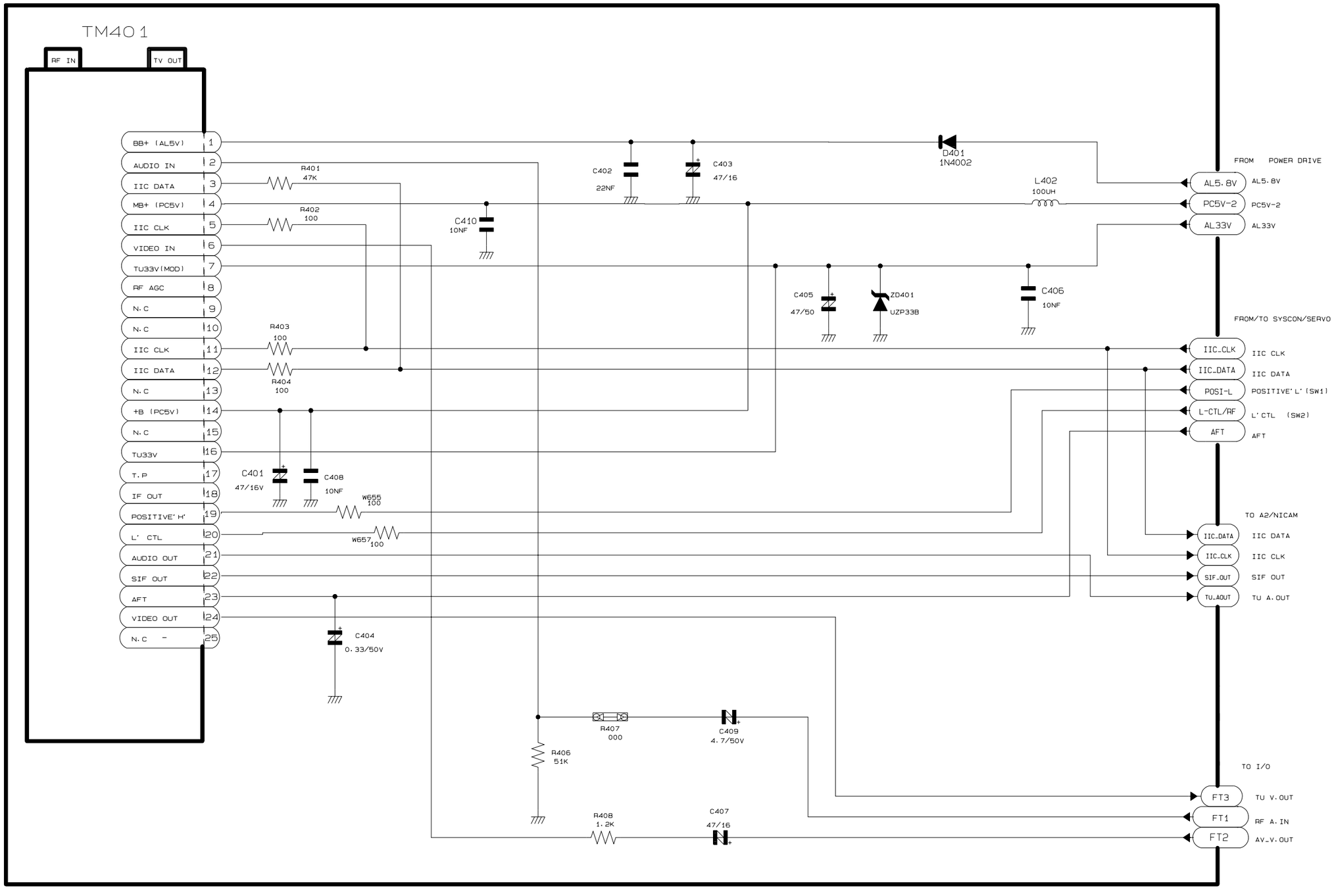
## 6-8 Karaoke


FROM/TO HIFI
A.L.OUT
A.R.OUT
FROM/TO SYSCON
SCORE_MIC
KARAOKE_MUTE
VCR_A.IN
MIC_V.PWM
ECHO_V.PWM
SCORE_DVD_A.IN
A.IN
FROM/TO A/V
ADUIO_ENV
MONO_A.OUT
ALPSV
FROM/TO POWER
PC5V
AL12V
FROM TO IO
KARAOKE_L.OUT
KARAOKE_R.OUT
DVD.A.L.OUT
DVD.A.R.OUT
MIC_IN
IH2
IH3
SK6
SK4
SK5
SK2
SK3
KA1
KA2
IK2
IK1
IK3
IK4
ICK1 4560
ICK2 4560
ICK3 4560(1201-000163)
ICK4 M65865FP
ICK5 KA22134
QK1 C3203
QK2 C3203
MONO RK01 JUMPER
CK54 OPEN
CK32 100NF
CK33 JUMPER
CK30 JUMPER
CK28 100NF
CK34 0.47/50
CK35 1NF
CK36 10NF
CK37 22/16
CK38 10NF
CK39 1/50
CK40 39CF
CK41 3.3NF
CK42 2.2/50
CK43 100NF
CK44 4.7NF
CK45 2.2NF
CK46 2.2NF
CK47 4.7NF
CK48 12NF
CK49 10NF
CK50 100NF
CK51 1000NF
CK52 47/16
CK53 OPEN
CK04 100/16
CK07 4700NF
CK10 4700NF(3216)
CK11 47/16
CK15 47/16
CK16 10NF
CK18 100NF
CK19 47/16
CK20 22PF
CK21 22PF
CK22 1/50
CK23 100NF
CK24 220/16
CK25 1/50
CK27 100PF
CK29 75PF
CK31 75PF
RK52 JUMPER
RK53 JUMPER
KARAOKE_L.OUT
KARAOKE_R.OUT
KARAOKE_MUTE
SCORE_MIC
VCR_A.IN
SCORE_DVD_A.IN
PRE AMP1
PRE AMP2
VOLUME CONTROL
PWR AMP1
PWR AMP2
OSCILLATOR
SDRAM
MAIN CONTROL
LPF1
LPF2
LPF3
LPF4
VOL

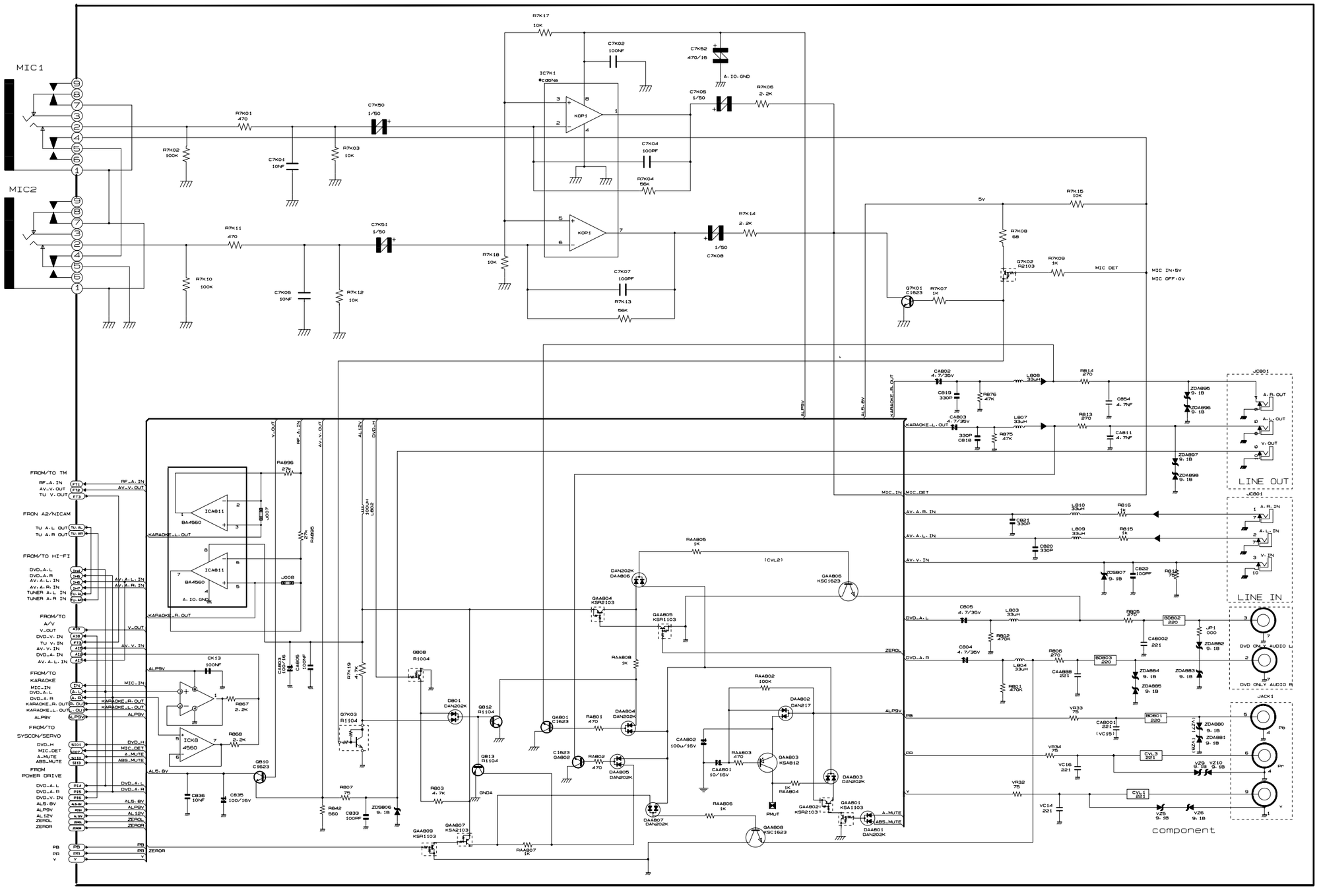
## 6-9 OSD/VPS/PDC



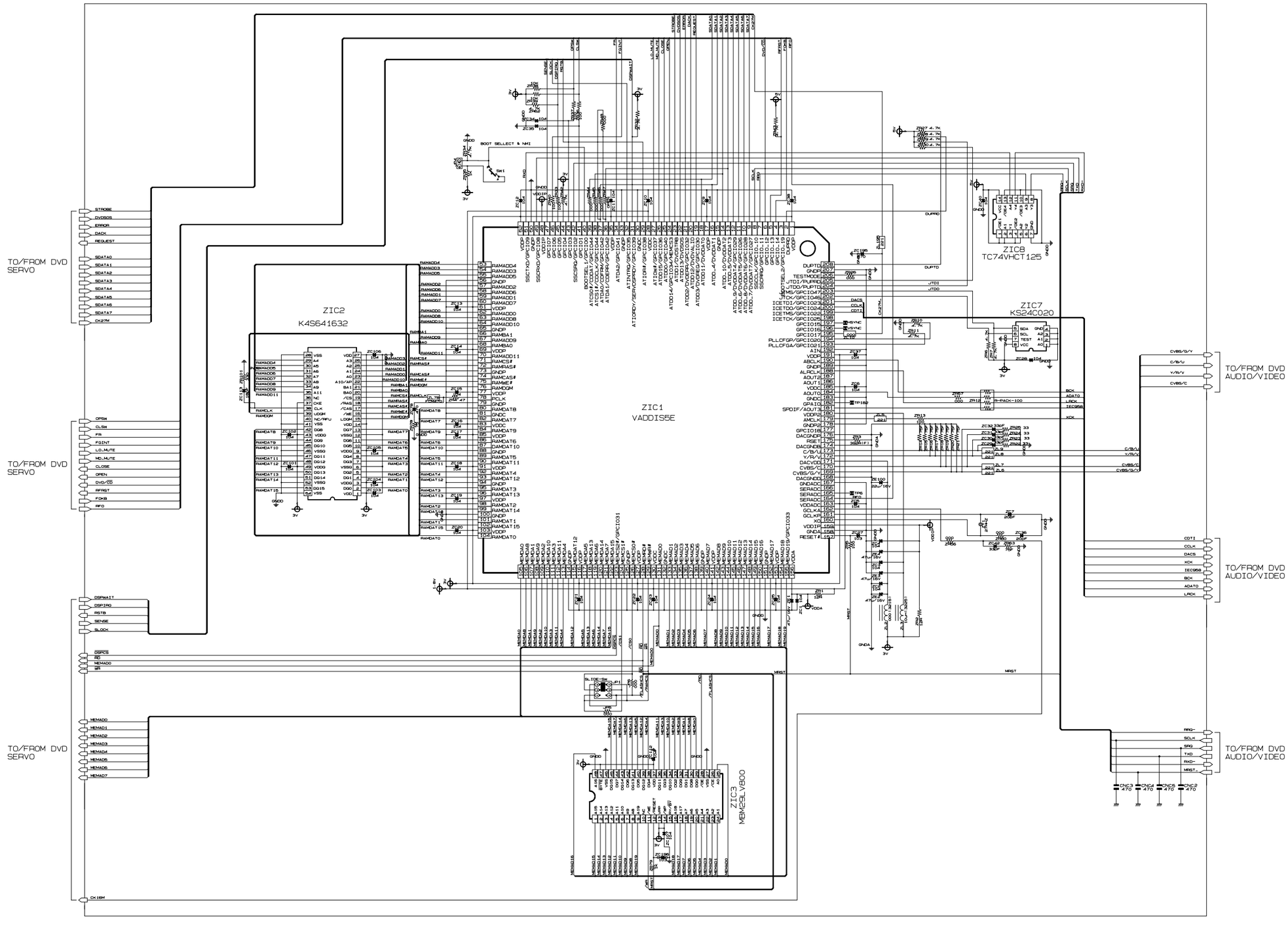
## 6-10 TM


TM401
RF IN
TV OUT
BB+ (AL5V) 1
AUDIO IN 2
IIC DATA 3
MB+ (PC5V) 4
IIC CLK 5
VIDEO IN 6
TU33V(MOD) 7
RF AGC 8
N.C 9
N.C 10
IIC CLK 11
IIC DATA 12
N.C 13
+B (PC5V) 14
N.C 15
TU33V 16
T.P 17
IF OUT 18
POSITIVE'H' 19
L' CTL 20
AUDIO OUT 21
SIF OUT 22
AFT 23
VIDEO OUT 24
N.C - 25
R401 47K
R402 100
R403 100
R404 100
C401 47/16V
C408 10NF
W655 100
W657 100
C410 10NF
C402 22NF
C403 47/16
C404 0.33/50V
D401 1N4002
L402 100UH
C405 47/50
ZD401 UZP33B
C406 10NF
R407 000
C409 4.7/50V
R406 51K
R408 1.2K
C407 47/16
FROM POWER DRIVE
AL5.8V
PC5V-2
AL33V
FROM/TO SYSCON/SERVO
IIC_CLK
IIC_DATA
POSI-L
L-CTL/RF
AFT
TO A2/NICAM
IIC_DATA
IIC_CLK
SIF_OUT
TU_AOUT
TO I/O
FT3
FT1
FT2
IIC CLK
IIC DATA
POSITIVE'L' (SW1)
L'CTL (SW2)
AFT
IIC DATA
IIC CLK
SIF OUT
TU A.OUT
TU V.OUT
RF A.IN
AV_V.OUT

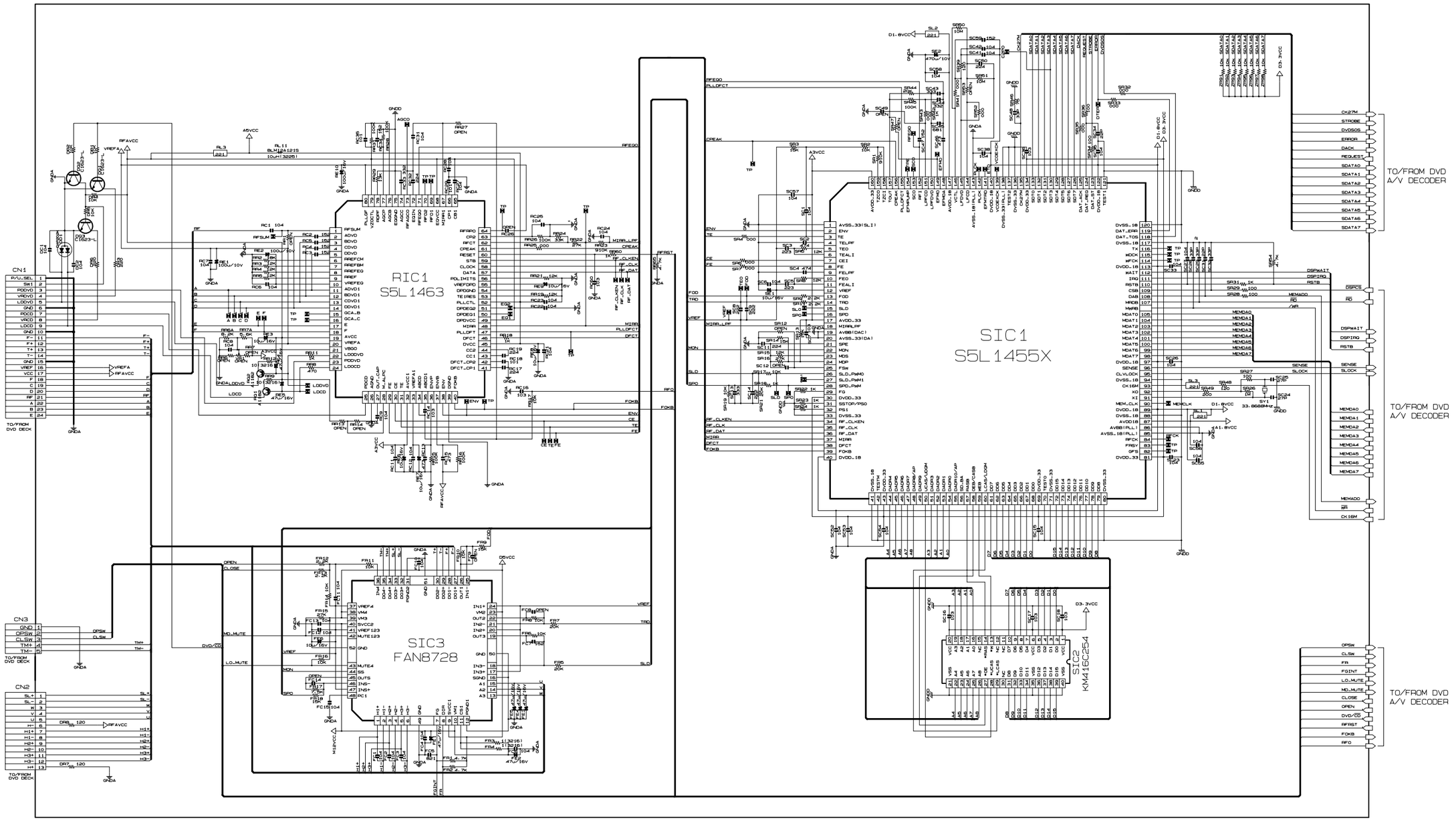
## 6-11 Input-Output



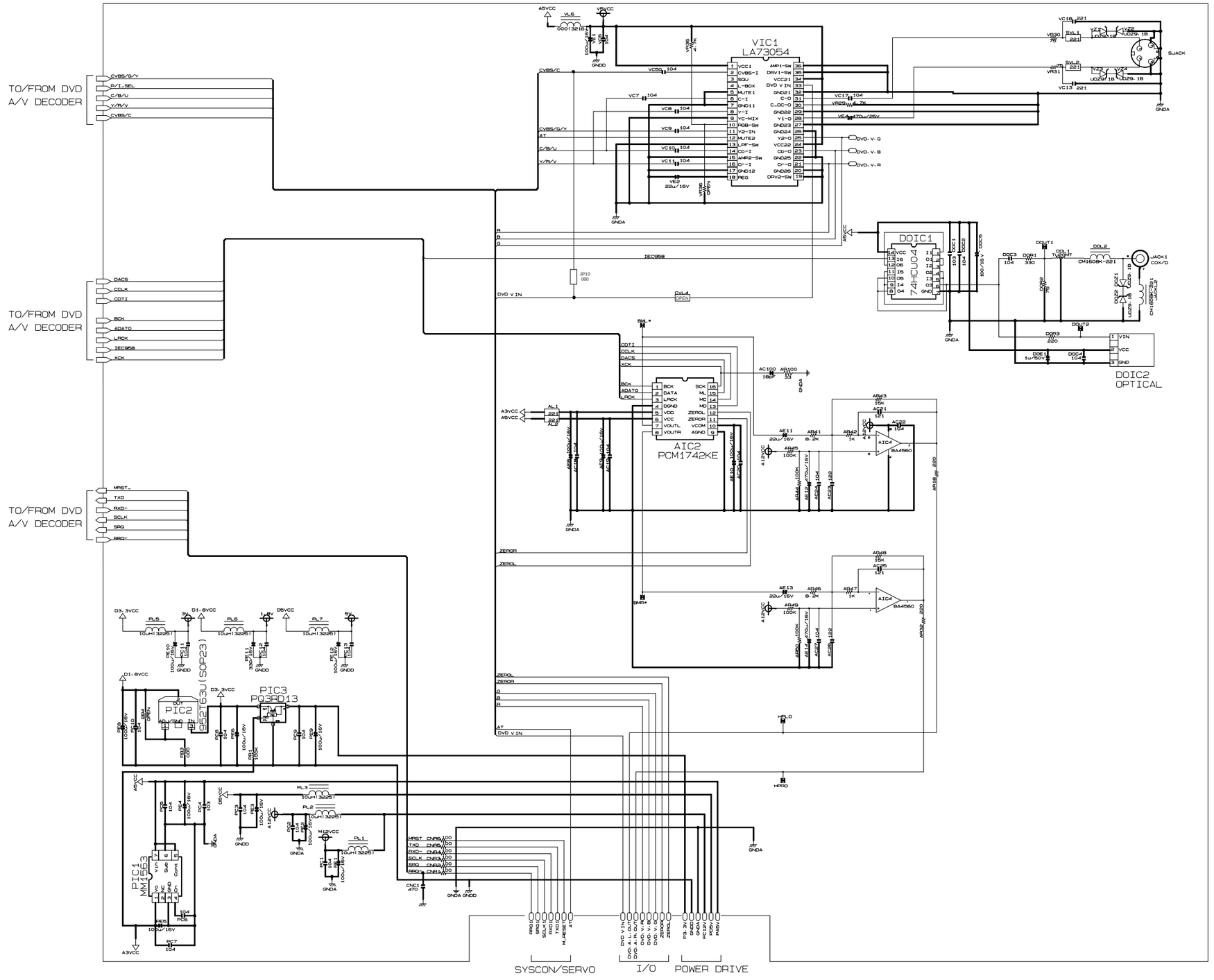
## 6-12 DVD AV-Decoder



## 6-13 DVD Servo



## 6-14 DVD Audio/Video



# MEMO